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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,007	04/28/2005	Mitsuaki Kobayashi	58283US004	1713
32692 7590 08/15/2008 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER RONESL VICKERY M				
ART UNIT 1796		PAPER NUMBER		
NOTIFICATION DATE 08/15/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

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**Office Action Summary****Application No.**

10/533,007

**Applicant(s)**

KOBAYASHI ET AL.

**Examiner**

VICKEY RONESI

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The outstanding 103 rejection is withdrawn in light of applicant's amendment filed on 5/1/2008.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 5/1/2008. In particular, claim 1 has been amended to narrow the range for the amount of hydrophilic silica and claims 8 and 9 are new. Thus, the following action is properly made final.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claims 1, 8, and 9, the range with a lower limit endpoint of “greater than 15” or “15.4” in regards to the amount of hydrophilic silica particles fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of either endpoint in the application as originally filed, *In re*

*Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. While there is support for an amount of 15 pbw (parts by weight) on page 11, line 4 of the specification, there is no support for an endpoint of "greater than 15" which would include a lower limit of 15.01, 15.2, 15.25, etc, support for which is not found in the specification. As for the lower limit of 15.4, support is had for 15.4 only for a composition comprising polylactic acid as the aliphatic polyester and polyethylene glycol as the plasticizer.

With respect to claims 2-7, they are rejected for being dependent on a rejected claim.

***Claim Rejections - 35 USC § 103***

5. Claims 1-3, 8, and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Obuchi et al (US 5,916,950).

Obuchi et al discloses a thermal resistant resin composition (abstract) comprising 100 parts by weight of a resin component comprising a lactic acid component such as polylactic acid (col. 6, line 35) and another aliphatic polyester such as polyhydroxybutyric acid (col. 6, lines 50-51) and polyethylene succinate (col. 6, line 52); 0.1-70 parts by weight of a filler containing at 50 % or more SiO<sub>2</sub> (col. 7, lines 33-37); and optionally a plasticizer (col. 8, line 4).

Obuchi et al fails to exemplify a composition containing a plasticizer, however, Obuchi et al teaches its optional use.

Given that Obuchi et al teaches the use of plasticizers, it would have been obvious to one of ordinary skill in the art to utilize a plasticizer for its known and disclosed use.

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6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obuchi et al (US 5,916,950) in view of Tanifuji et al (US 5,691,398).

The discussion with respect to Obuchi et al in paragraph 5 above is incorporated here by reference.

Obuchi et al fails to disclose specific plasticizers in specified amounts.

Tanifuji et al disclose a polylactic acid composition comprising a plasticizer in amounts of 5-30 parts by weight per 100 parts by weight of resin (col. 3, lines 13-21) and teaches that known plasticizers for polylactic acid include phthalates, sebacates, and diethylene glycol dibenzoate (col. 2, line 54 to col. 3, line 12).

Given that Obuchi et al is open to the use of plasticizers in its composition containing polylactic acid and further given that Tanifuji et al teaches known plasticizers in known amounts of polylactic acid, it would have been obvious to one of ordinary skill in the art to utilize the plasticizers taught by Tanifuji et al in an amount that overlaps with the presently claimed range. Case law holds that the selection of a known material based on its suitability for its intended use supports *prima facie* obviousness. *Sinclair & Carroll Co vs. Interchemical Corp.*, 325 US 327, 65 USPQ 297 (1045).

7. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khemani et al (US 6,573,340).

Khemani et al discloses a biodegradable blend composition (col. 26, lines 4-27) comprising a stiff synthetic biodegradable polymer such as polylactic acid; a soft synthetic biodegradable polymer such as hydroxybutyrate copolymers and polybutylene succinate; a filler,

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and a plasticizer such as polyethylene glycol (col. 13, lines 1-26). The filler is present in an amount greater than 15 wt % (col. 16, lines 7-12) and includes silica (col. 15, line 15) having a particle size of 10 nm to 2 mm (col. 14, lines 40-43).

Khemani et al fails to exemplify a composition comprising the silica and plasticizer like presently claimed.

Even so, it would have been obvious to one of ordinary skill in the art to prepare a composition comprising the biodegradable polymers, silica as inorganic fillers having a particle size of less than 100 nm given that Khemani et al teaches silica as inorganic filler with a particle size overlapping in range with the presently claimed range.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khemani et al (US 6,573,340) in view of Tanifuji et al (US 5,691,398).

The discussion with respect to Khemani et al in paragraph 7 above is incorporated here by reference.

Khemani et al fails to disclose the amount of plasticizer.

Tanifuji et al disclose a polylactic acid composition comprising polylactic acid and a plasticizer and teaches that the amount plasticizer is of 5-30 parts by weight per 100 parts by weight of resin (col. 3, lines 13-21).

Given that Khemani et al discloses the use of plasticizers in its composition containing polylactic acid and further given that Tanifuji et al teaches typical amounts of plasticizer for polylactic acid, it would have been obvious to one of ordinary skill in the art to utilize the amount of plasticizer taught by Tanifuji et al which overlaps with the presently claimed amount.

***Response to Arguments***

9. Applicant's arguments filed on 5/1/2008 are moot in view of the new grounds of rejection.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/7/2008  
Vickey Ronesi

/V. R./  
Examiner, Art Unit 1796

/VASUDEVAN S. JAGANNATHAN/  
Supervisory Patent Examiner, Art Unit 1796